



K A N S A S

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Tularemia Q&A

What is tularemia?

Tularemia is a widespread disease of animals. This infectious disease is caused by a hardy bacterium, *Francisella tularensis*, found most often in rodents, rabbits, and hares. The bacterium can remain alive for weeks in water and soil.

Approximately 200 cases of tularemia in humans are reported annually in the United States, mostly in persons living in the south-central and western states. Nearly all cases occur in rural areas and are associated with the bites of infective ticks and biting flies or with the handling of infected rodents, rabbits, or hares. Occasional cases result from inhaling infectious aerosols and from laboratory accidents.

How do people become infected with the tularemia bacteria?

Tularemia bacterium does not become airborne, nor is it spread from person to person. People can get tularemia many different ways, such as through the bite of an infected insect or other arthropod (usually a tick or deerfly), handling infected animal carcasses, eating or drinking contaminated food or water, or breathing in dust contaminated with *F. tularensis*.

Francisella tularensis is highly infectious: a small number of bacteria (10-50 organisms) can cause disease. Persons who might inhale an infectious aerosol from a bioweapon would generally experience severe respiratory illness, including life-threatening pneumonia and systemic infection, if they were not treated.

What are the signs and symptoms of tularemia?

Symptoms of tularemia usually appear 3 to 5 days after exposure to the bacteria, but can take as long as 14 days.

Depending on the route of exposure, the tularemia bacteria may cause skin ulcers, swollen and painful lymph glands, inflamed eyes, sore throat, oral ulcers, or pneumonia. If the bacteria were inhaled, symptoms would include the abrupt onset of fever, chills, headache, muscle aches, joint pain, dry cough, and progressive weakness. Persons with pneumonia can develop chest pain, difficulty breathing, bloody sputum, and respiratory failure. 40% or more of persons with the lung and systemic forms of the disease may die if they are not treated with appropriate antibiotics.

DIVISION OF HEALTH

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What should someone do if they suspect they or others have been exposed to the tularemia bacteria?

Seek prompt medical attention. If a person has been exposed to *Francisella tularensis*, treatment with antibiotics for 14 days after exposure may be recommended. People who have been exposed to *F. tularensis* should be treated as soon as possible. The disease can be fatal if it is not treated with the appropriate antibiotics.

Local and state health departments should be immediately notified so an investigation and control activities can begin quickly. If the exposure is thought to be due to criminal activity (bioterrorism), local and state health departments will notify CDC, the FBI, and other appropriate authorities.

How is tularemia diagnosed?

When clinicians suspect tularemia, a healthcare worker will collect specimens, such as blood or sputum, from the patient for testing in a diagnostic or reference laboratory. Laboratory test results for tularemia may be presumptive or confirmatory.

Preliminary identification (presumptive) may take less than 2 hours, but confirmatory testing will take longer, usually 24 to 48 hours.

Can tularemia be effectively treated with antibiotics?

Yes. After potential exposure or diagnosis, early treatment is recommended with an antibiotic. Sensitivity testing of the tularemia bacterium can be done in the early stages of a response to determine which antibiotics would be most effective.

Is there a vaccine available for tularemia?

In the past, a live attenuated vaccine for tularemia has been used to protect laboratory workers, but it is unlicensed. No live attenuated vaccine is available in the U.S.